

Claims

1. Device for substitute-switching of a switching system,
characterized in that
5 there is assigned to each switching system (S_1) a redundant
switching system (S_{1b}) as redundancy partner, both of which
systems have access to a transmission network,
and in that there are provided a network management system (NM)
and at least one monitor with real-time capability (SC) which
10 are operatively connected to each other and to each of the
switching systems (S_1), the correspondingly redundant switching
systems (S_{1b}) and the transmission network.
2. Device according to Claim 1,
15 characterized in that
the switching system (S_1) and the redundant switching system
(S_{1b}) have an identical hardware and software structure.
3. Device according to Claim 1, 2,
20 characterized in that
the database of the switching system (S_1) and of the redundant
switching system (S_{1b}) is substantially identical in respect of
permanent/semi-permanent data at any point in time.
- 25 4. Device according to Claims 1 to 3,
characterized in that
the configuration formed by the switching system (S_1), the
redundant switching system (S_{1b}), the network management system
(NM) and the at least one monitor (SC) is distributed over a
30 plurality of locations.
5. Device according to Claims 1 to 4,
characterized in that

the switching system (S_1) and the correspondingly redundant switching system (S_{1b}) have packet-based interfaces.

6. Device according to one of the preceding claims,
5 characterized in that
the redundant switching system (S_{1b}) is in an operating state (hot standby) which is marked by the presence of a substantially current database, active applications and the outward blocking of all switching-oriented packet-based
10 interfaces.

7. Device according to one of the preceding claims,
characterized in that
the packet addresses (IP addresses) of the packet-based
15 interfaces of the switching system (S_1) and of the respective packet-based partner interfaces of the redundant switching system (S_{1b}) are identical.

8. Device according to one of the preceding claims,
20 characterized in that
the transmission network has at least one cross-connect device (CC) which can be controlled by NM or SC, for switching through TDM connections.

25 9. Device according to one of the preceding claims,
characterized in that
the transmission network has a direct communications interface between the switching system (S_1) and the switching system (S_{1b}).

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10. Monitor for monitoring and operating switching systems,
which monitor switches over to a redundantly assigned switching system in real time when one switching system fails.

11. Plurality of geographically redundant monitors according to Claim 10, which monitors monitor each other and, in a coordinated manner, effect substitute switching of a switching system to a redundantly assigned switching system in real time.

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12. Plurality of monitors according to Claim 11, which monitors do not switch between paired-redundancy switching systems in the event of faulted intercommunication.